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EXAMINER

DONOVAN, LINCOLN D

ART UNIT	PAPER NUMBER
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2832

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

Paper No. 12

Application Number: 09/682,519

Filing Date: 09-13-01

Appellant(s): Wang et al.

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Leon Radomsky

For Appellant

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**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 11-13-02.

**(1) *Real Party in Interest***

A statement identifying the real party in interest is contained in the brief.

**(2) *Related Appeals and Interferences***

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

**(3) *Status of Claims***

The statement of the status of the claims contained in the brief is correct.

**(4) *Status of Amendments After Final***

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) *Summary of Invention***

The summary of invention contained in the brief is correct.

**(6) *Issues***

The appellant's statement of the issues in the brief is correct.

**(7) *Grouping of Claims***

Appellant's brief includes a statement that claims 1-22 do not stand or fall together and provides reasons as set forth in 37 CFR 1.192(c)(7) and (c)(8).

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**(8) *Claims Appealed***

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(9) *Prior Art of Record***

The following is a listing of the prior art of record relied upon in the rejection of claims under appeal.

6,198,371	Laskaris et al.	3-2001
6,336,794	Kim	1-2002
4,781,363	Braun	11-1988
6,202,492	Ohsaki	3-2001

**(10) *Grounds of Rejection***

The following ground(s) of rejection are applicable to the appealed claims:

This rejection is set forth in prior Office Action, Paper No. 7, see copy below.

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 7-11, 14 and 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Laskaris et al. [US 6,198,371] in view of Kim [US 6,336,794].

Laskaris et al. disclose an open magnet assembly with a floor mount comprising:

- a first assembly [12] mounted about a first longitudinally-extending and generally-vertically-aligned axis including:

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- at least one superconducting main coil [24] positioned around the axis; and
- a vacuum enclosure [26] enclosing the at least one superconductive main coil;

- a second assembly [14] mounted about a second longitudinally-extending and generally-vertically-aligned axis coaxially aligned with the first axis and spaced longitudinally apart from and disposed below the first assembly, the second assembly including:

- at least one superconducting main coil [30] positioned around the axis; and
- a vacuum enclosure [62] enclosing the at least one superconductive main coil;

- at least one support beam [16, 18] external to the first and second vacuum enclosures having a first end attached to the first assembly and a second end attached to the second assembly; and

- a support apparatus [20] supporting both assemblies from a floor [42].

Laskaris et al. discloses the instant claimed invention except for the support apparatus providing vibration isolation and the specific isolation system used.

Kim discloses an vibration isolation system [figure 1] with a plurality of isolators [40] for a piece of machinery [10].

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use a vibration isolation system for the support structure of Laskaris et al., as suggested by Kim, for the purpose of reducing vibration of the open magnet assembly.

Kim discloses the vibration isolation system mounted on a floor assembly [50] supporting a support member [30] supporting the machinery away from the floor structure [figure 1].

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It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the isolation support mounting design of Kim in Laskaris et al., as modified, for the purpose of isolating the device from the floor structure.

The specific footprint of the isolation system and its use as a retrofit would have been obvious design considerations for the purpose of reducing space usage and costs.

3. Claims 2-4, 12-13, 15-17 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Laskaris et al. in view of Kim as applied to claims 1, 7-11, 14 above, and further in view of Ohsaki [US 6,202,492].

Laskaris et al., as modified, discloses the instant claimed invention except for the isolators being adjustable and actively pneumatically controlled.

Ohsaki discloses a surface [6] being supported by adjustable actively controlled pneumatic isolators [4a-d, column 5, lines 1-12].

It would have been obvious to one having ordinary skill in the art at the time the invention was made to the isolator design of Ohsaki for the isolators of Laskaris et al., as modified, for the purpose of accommodating variations in the operating environment.

The specific frequencies, Q-factors, bandwidth, etc. of the control would have been obvious design considerations based on the specific application and environment of use.

4. Claims 5-6 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Laskaris et al., as modified, as applied to claim 1 and 14 above, and further in view of Braun [US 4,781,363].

Laskaris et al., as modified, discloses the instant claimed invention except for the use of balance weights on the isolators.

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Braun discloses the use of balance weights [9] mounted on an isolator.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use balance weights on the isolators of Laskaris et al., as modified, for the purpose of accommodating unexpected balance shifts.

It would have been obvious to have the amount of weight applied be adjustable for the purpose of accommodating varying operating environments.

**(11) Response to Argument**

Applicant argues:

[1] Laskaris teaches away from a vibration isolation system. Applicant states that the vibration “suppression” system of Laskaris is a rigid vibration suppression system and not a vibration isolation system. The claimed invention is distinguished from Laskaris as it isolates vibration from the MRI, rather than fixes the MRI to the floor. Both the claimed invention and Laskaris fix the MRI system to the floor. The claimed invention renders the MRI system free of external vibrations.

Applicant has not claimed that the vibration system isolates the MRI from external vibrations. Applicant merely claims that there is a vibration isolation system. **Applicant’s claims have not precluded that the vibration reduction system may reduce the vibration caused by the MRI system to its support structure.** Applicant has not claimed the MRI being isolated from its environment.

[2] There is no motivation to combine the vibration isolation system of Kim with that of Laskaris. Applicant states that Kim’s invention “teaches how to isolate the environment from machine vibration.” and “Kim provides no teaching or suggestion that a vibration isolation system would be useful as a support for an MRI magnet assembly.” The reduction of vibration from the MRI to the environment is not a concern in Laskaris.

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In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the vibration of the MRI system, as a whole, is a concern of Laskaris. To reduce the vibration to the system is desired by both the claimed invention and Laskaris. Kim discloses a design to reduce vibration caused by a compressor, or piece of heavy, vibration prone equipment (such as any MRI assembly).

[3] Kim is non-analogous art.

In response to applicant's argument that Kim is nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, both Laskaris and Kim are concerned with reducing vibration from a piece of heavy equipment.

[4] The dependent claims are "separately patentable."

Regarding claims 2-6, 12-13, 15-18 and 22, applicant state that the combination is based on "improper hindsight reconstruction."

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which



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was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Regarding claims 5-6 and 18, Braun provides no motivation for providing a vibration isolation system.


The vibration isolation system, as claimed, is taught by the combination of Laskaris with Kim.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,


ldd

December 6, 2001

  
LINCOLN DONOVAN  
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Conferees

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